Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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CAVITATION DUE TO COVID-19: A CASE OF SECONDARY ATYPICAL MYCOBACTERIAL INFECTION POST-COVID-19

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INTRODUCTION: The novel Coronavirus disease 2019 pandemic has caused over 2 million deaths worldwide. Two recent systematic reviews and 1 meta-analysis reviewing the CT chest findings of COVID-19 did not reveal cavitation as a common finding with a recent retrospective review estimating the prevalence to be around 3.3%. Among the published examples, about half are solitary cavitary lesions. Most common causative organisms include staphylococcus aureus, klebsiella, and Enterobacter cloacae complex. A recently published case series described 6 cases of co-infection of Mycobacterium tuberculosis with COVID-19 causing cavitary lung disease. We report a case of Mycobacterium Avium Complex (MAC) infection causing cavitary lung disease as a complication of COVID-19 pneumonia.

CASE PRESENTATION: 39 year old female with type 2 diabetes and hypothyroidism with a recent diagnosis of COVID-19 and pulmonary embolism. She presented with worsening cough, hemoptysis and left sided chest pain.CT Chest on admission showed a 7cm left lower lobe abscess with an associated pleural effusion and a left lower lobe pulmonary embolism along with scattered ground glass and consolidative opacities. Initial hospital treatment included prednisone, levofloxacin, and apixaban. One week after discharge she was readmitted with worsening left sided chest pain with scant hemoptysis.On readmission, workup included mycobacterial, fungal, auto-immune and HIV tests which were all negative. Patient improved significantly on broad-spectrum antibiotics which included Cefepime and Metronidazole. Laboratory work-up was significant for ESR $>$ 100, CRP of 6 mg/dl. Patient continued to be on room air with improved symptoms and was discharged on oral Augmentin for 4 weeks with plans for outpatient follow-up CT chest. On follow-up, CT chest showed no significant difference in the cavity size and continued to have significant left sided pleuritic chest pain. Her antibiotic course was extended due to the persistence of the cavity and symptoms. At the conclusion of 8 weeks of antibiotics with persistent symptoms, a bronchoscopy was done with a BAL performed in the left lower lobe. AFB cultures grew Mycobacterium Avium Complex.

DISCUSSION: Lung cavitation in COVID-19 is an uncommon and so far under-reported consequence/complication. Considering that it might present as a late complication, as in the above case, it is imperative to follow-up these patients closely and consider a broad and appropriate workup. The mechanism of lung cavitation is probably multifactorial, including lung necrosis from the initial pulmonary embolism, effect of initial SARS-CoV2 infection, secondary bacterial, fungal or mycobacterial infection and immunosuppression from initial steroid course.

CONCLUSIONS: We report this case to add a secondary atypical mycobacterial infection causing cavitary lung disease to the ever increasing list of late complications of COVID-19 pneumonia.

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